

LV1035M

Specifications

Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC\ max}$		12	V
Allowable power dissipation	$P_{d\ max}$		1100	mW
Operating temperature	T_{opr}		-20 to +70	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^\circ\text{C}$

Operating Conditions at $T_a = 25^\circ\text{C}$

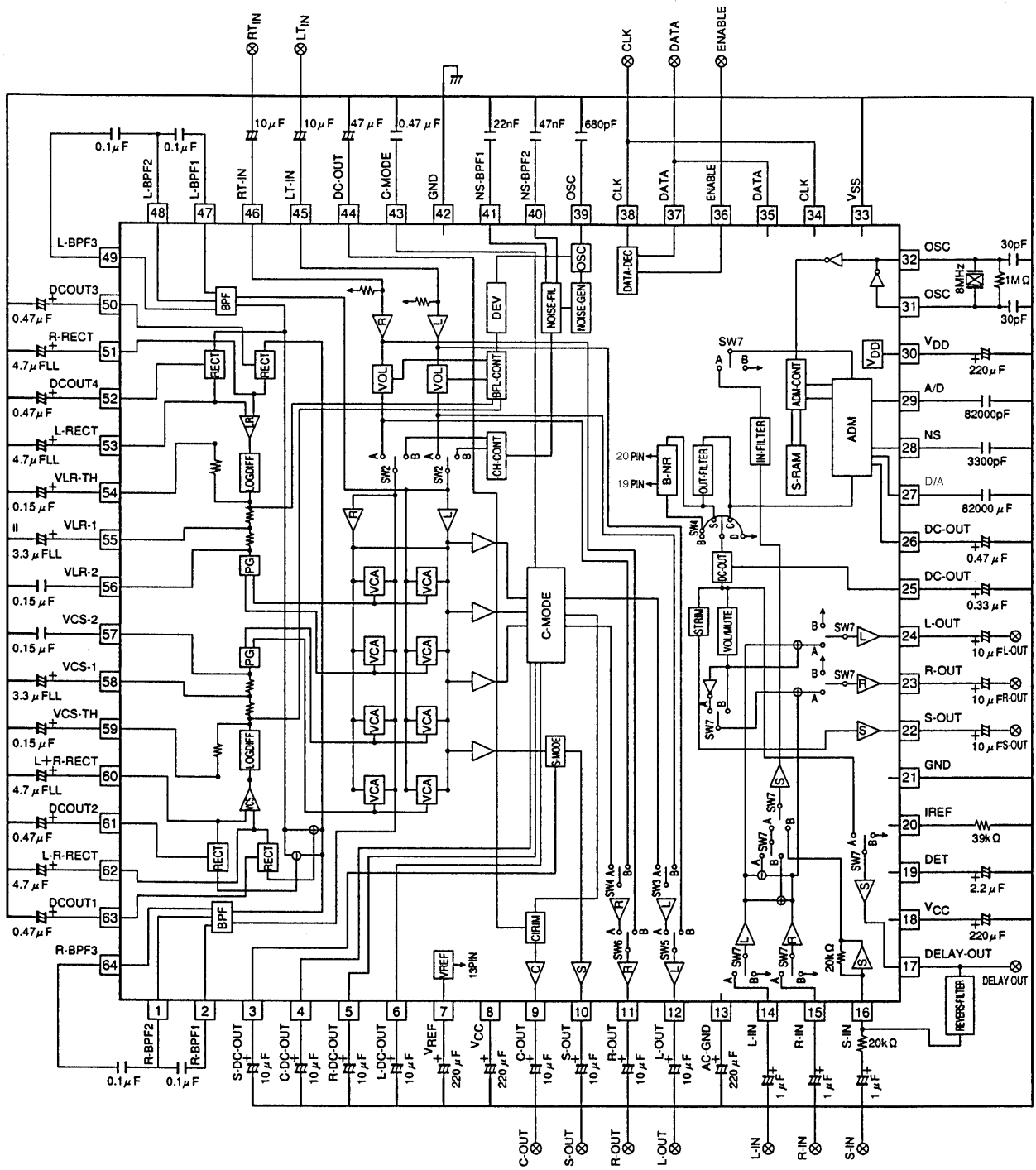
Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		9	V
Operating supply voltage range	$V_{CC\ op}$		8 to 10	V
Input high-level voltage	V_{IH}		3.5 to 5.5	V
Input low-level voltage	V_{IL}		0 to 1.5	V
Dolby level	$V_O\ \text{Dolby}$		300	mVrms

Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = 9\ \text{V}$, $V_{IN} = 300\ \text{mV rms}$ (left and right inputs), $300\ \text{mVrms} \times 0.707$ (center and surround inputs), $f = 1\ \text{kHz}$, center trim = 0 dB, surround trim = 0 dB, delay time = 20 ms.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current	I_{CC}	No signal		80	100	mA
Center channel output level	V_{OC}	L = R input	-2	0	+2	dB
Output level deviation	V_{OA}	L, R, Sch from Cch	-0.5	0	+0.5	dB
Matrix rejection: left	R_{iL}	L input		-40	-25	dB
Matrix rejection: center	R_{jC}	L = R input		-40	-25	dB
Matrix rejection: right	R_{jR}	R input		-40	-25	dB
Matrix rejection: surround	R_{jS}	L = -R input		-40	-25	dB
Left channel harmonic distortion	THD L	L output		0.03	0.09	%
Center channel harmonic distortion	THD C	C output		0.03	0.09	%
Right channel harmonic distortion	THD R	R output		0.03	0.09	%
Surround channel harmonic distortion 1	THD S1	S matrix output				%
Surround channel harmonic distortion 2	THD S2	S delay output		0.1	0.7	%
S/N, L	SN, L	L output: CCIR/ARM, $R_s = 10\ \text{k}\Omega$		-76	-71	dB
S/N, C	SN, C	C output: CCIR/ARM, $R_s = 10\ \text{k}\Omega$		-77	-71	dB
S/N, R	SN, R	R output: CCIR/ARM, $R_s = 10\ \text{k}\Omega$		-76	-71	dB
S/N, S1	SN, S	S matrix output				dB
S/N, S2	SN, S	S delay output		-75	-65	dB
Left channel signal handling	SH_L	L output: $V_{CC} = 8.5\ \text{V}$, $\text{THD} \leq 1\%$	15	16		dB
Center channel signal handling	SH_C	C output: $V_{CC} = 8.5\ \text{V}$, $\text{THD} \leq 1\%$	15	18		dB
Right channel signal handling	SH_R	R output: $V_{CC} = 8.5\ \text{V}$, $\text{THD} \leq 1\%$	15	16		dB
Surround channel signal handling	SH_{S1}	S delay output: $V_{CC} = 8.5\ \text{V}$, $\text{THD} \leq 3\%$	15	18		dB
Noise sequencer output level	V_{ns}	Each channel	50	70	90	mV
Noise reduction frequency characteristics	Dec1	0 dB, 1 kHz	-1.5	0.0	+1.5	dB
	Dec2	-20 dB, 1 kHz	-24	-22.5	-21	dB
	Dec3	0 dB, 5 kHz	-1.5	0.0	+1.5	dB
	Dec4	-20 dB, 5 kHz	-23.3	-21.8	-20.3	dB
	Dec5	-40 dB, 5 kHz	-46.8	-45.3	-43.8	dB
ProLogic off, left and right channels	THDoff	L, Rch 20 to 20 kHz BPF		0.01	0.03	%
ProLogic off, left and right channels S/N	S/NoFF	L, Rch CCIR/ARM		90	-80	dB

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Sample Application Circuit



A09640